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10/522,530

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Antonio Mileo

05788.0343

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22852

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03/10/2006

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EXAMINER

CHU, CHRIS H

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/522,530

Applicant(s)

MILEO ET AL.

Examiner

Chris H. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23, 25-37, 39 and 40 is/are rejected.
- 7) ☒ Claim(s) 24 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The prior art documents submitted by applicant in the Informational Disclosure Statements filed on January 27, 2005 have all been considered and made of record (note the attached copy of form PTO-1449).

### ***Drawings***

Eight (8) sheets for formal drawings were filed January 27, 2005 and have been accepted by the Examiner.

### ***Specification***

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 21-23, 25-37, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakahara et al. (JP 57-200238) which the applicant has listed on the Information Disclosure Statement.**

Regarding claims 21-23 and 25-37, Nakahara et al. discloses an optical fiber preform elongation process, comprising heating the preform so as to soften one region thereof; elongating the preform by submitting the preform to a traction; determining, during the step of elongating, the preform diameter in at least one measuring point along the preform and controlling the step of elongating on the basis of the determined diameter; measuring, during the step of elongating, at least a geometrical parameter of the preform and controlling, during the step of elongating, the position of said diameter measuring point according to the measured geometrical parameter in the Purpose and Constitution sections. The diameter is disclosed to be measured at the point to complete the deformation, which is a geometrical parameter and the diameter at this point is used to control the elongation. Nakahara et al. also discloses determining a profile of the softened region by capturing a digital image and detecting a predetermined number of points along the profile of the preform and interpolating said points. Nakahara et al. also discloses detecting a softened region final point at the point to complete the deformation, and controlling the position of the measuring point by measuring the diameter at a predetermined distance from the softened region final point. Since the diameter at the point to complete the deformation is desired, the predetermined distance is zero. Nakahara et al. also discloses comparing the determined diameter with a target diameter and controlling the elongation by controlling the speed at which the preform is pulled by traction. Nakahara et al. also discloses determining the preform diameter by controlling the position of the measuring point from the detected profile, since the point to complete the deformation is desired which is

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defined as between the zone in which the diameter varies and the zone having uniform diameter. Nakahara et al. also discloses controlling the target diameter according to the detected profile since the diameter at the point to complete deformation is compared to a permissible range.

Regarding claim 39, Nakahara et al. discloses an optical fiber preform elongation process, comprising heating the preform so as to soften one region thereof; elongating the preform by submitting the preform to a traction; determining, during the step of elongating, the preform diameter in at least one measuring point along the preform and controlling the step of elongating on the basis of the determined diameter; measuring, during the step of elongating, at least a geometrical parameter of the preform and varying, during the step of elongating, the position of said diameter measuring point according to the measured geometrical parameter in the Purpose and Constitution sections. The position of the measuring point is varied since it depends on the point to complete the deformation, which is defined as between the zone in which the diameter varies and the zone having uniform diameter.

Regarding claim 40, Nakahara et al. discloses an apparatus for elongating an optical fiber preform, comprising a monitoring device for obtaining information on geometrical parameters of the preform being elongated; said monitoring device comprising an image capturing device (see camera 8) for obtaining a profile of at least a portion of a softened region of the preform; and a processing device (see optimum outer diameter processor 11) for analyzing the profile for extracting information on the preform geometrical parameters; and a control device (see outer diameter controlling device 12)

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for controlling elongation process parameters using the preform geometrical parameters information in the Purpose and Constitution sections.

**Claims 21, 22, 27-30 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenmochi et al. (6,178,778).**

Regarding claims 21, 22 and 30, Kenmochi et al. discloses an optical fiber preform elongation process, comprising heating the preform so as to soften one region thereof (see column 3, lines 15-16); elongating the preform by submitting the preform to a traction (see column 3, lines 16-19); determining, during the step of elongating, the preform diameter in at least one measuring point along the preform and controlling the step of elongating on the basis of the determined diameter (see column 3, lines 19-24); measuring, during the step of elongating, at least a geometrical parameter of the preform and controlling, during the step of elongating, the position of said diameter measuring point according to the measured geometrical parameter (see column 3, lines 25-30). Kenmochi et al. discloses that the diameter is measured at the position where the preform is drawn and reduced in diameter most abruptly, which is a geometric parameter. To determine where in the neck region the diameter is reduced most abruptly, the profile of at least a portion of the softened region must be detected. Further, since the diameter is measured at that position, the elongation is also controlled by the detected geometrical parameter.

Regarding claims 27 and 33, Kenmochi et al. discloses controlling the process by comparing the determined diameter with a target diameter in column 3, lines 49-54.

Regarding claims 28 and 29, Kenmochi et al. discloses controlling the elongation by controlling the speed at which the preform is pulled by traction in column 3, lines 16-24.

***Allowable Subject Matter***

**Claims 24 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

The following is a statement of reasons for the indication of allowable subject matter: The prior art cited on attached form PTO-892 is the most relevant prior art known, however, the invention of these claims distinguishes over the prior art of record because none of the references either alone or in combination disclose or render obvious what is defined in these claims.

Regarding claims 24 and 38, the prior art of record fails to teach or fairly suggest a process of elongating an optical fiber preform comprising detecting the length of the softened region and wherein the diameter is measured at a predetermined percentage of the length from the softened region starting point or ending point along with the limitations of any base claims.

***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris H. Chu whose telephone number is 571-272-8655. The examiner can normally be reached on 8:30 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.



Chris H. Chu  
Patent Examiner  
March 1, 2006



MICHELLE CONNELLY-CUSHWA  
PRIMARY EXAMINER  
3/3/06